



SUMMARY OF BENEFITS, ASSUMPTIONS AND RISK

AFC-2

DIVISION Technology	LOCATION Tucson, Arizona	DEPARTMENT R&D, Primary Metals
PROJECT TITLE TIP Support		Budget and Appropriation Number
SPENDING CATEGORY		\$ 161,000 Amount of Proposal
<input type="checkbox"/> EXPANSION OF BUSINESS	<input type="checkbox"/> ENVIRONMENTAL	Start Date 1/1/84
<input type="checkbox"/> COST REDUCTION	<input type="checkbox"/> OSHA	Complete Date 12/31/84
<input type="checkbox"/> MAINTENANCE X X TECHNOLOGY	<input type="checkbox"/> LEASE (BEYOND 1 YEAR)	Included in Capital Plan <input type="checkbox"/> Yes <input type="checkbox"/> No

ANTICIPATED BENEFITS:

This equipment is necessary for the successful implementation of the MLI technology at Columbia Falls as recommended by MLI. In order to fully utilize the technology purchased from MLI, it is essential that we develop the capability of predicting the economic and operating effects of raw material properties on the anode. This equipment would allow us to develop that capability.

CRITICAL ASSUMPTIONS: (Contributing to Economic Outcome of Project, such as, Prices, Market Analysis, Volumes, Costs, etc.)

While it may be possible to run the 20 pot test at Columbia Falls without this expenditure, the proposed equipment will greatly enhance our knowledge base and increase the probability of lasting successful application of MLI technology to the Columbia Falls operation. A corresponding approval of \$166M in operating costs will be needed to develop this equipment in 1984.

RISK OR DEGREE OF UNCERTAINTY:

While the probability of technical success is high, an intensive effort will be needed in 1984 to provide Columbia Falls with the timely answers to the questions they will have during the evaluation of MLI technology.

Summary Of Spending AFC-3

Division Department, Location:	Technology, R&D- Primary Metals, Tucson	Appropriation and Budget No:
Project Title:	TIP Support	Internal Project No: To be assigned

A. CASH REQUIREMENTS OF PROPOSED PROJECT (in thousands of dollars)		Cash Requirements	Spending By Calendar Year					
			1st Year	2nd Year	3rd Year	4th Year	5th Year	After 5th
CAPITAL AND EXPENSE								
1. Land		151,000	151,000					
2. Buildings								
Machinery and Equipment								
Salvage Value of Disposals (deduct)								
3. Spare Parts								
6. Start Up								
7. Site Preparation								
8. Feasibility Studies								
9. Field Investigation and Development								
10. Research								
11. Preliminary Engineering								
12. Lease Payments*								
13. Maintenance Contract								
14. Other, Explain .INSTALLATION.....	10,000	10,000						
15. Total Capital and Expense	161,000	161,000						
B. WORKING CAPITAL (Reduction)								
Accounts Receivable								
Inventories								
Accounts Payable								
Other								
16. Total Working Capital								
17. Total Spending								
MEMO:								
18. Environmental Included Above								
19. OSHA Expenses Included Above								
20. Distribution of Cash Requirements:								
Capital	151,000	151,000						
Expense	10,000	10,000						
Working Capital								
21. QUASI CAPITAL:								
Present Value of Lease Payments								
Other, Explain								
Total Quasi Capital								

* If Payments Qualify As "Quasi Capital" Do Not Include As Expense On AFC-1

C. NET ACCDUNTING INCOME AFTER TAX	1st Year	2nd Year	3rd Year	4th Year	5th Year	After 5th

D. FINANCIAL CONCURRENCE:			
Prepared By _____	Date _____	Reviewed By _____	Date _____